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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/526,948	10/28/2005	Peter Frank Ekhart	0470-050777	7559

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EXAMINER	
BLAND, LAYLA D	

ART UNIT	PAPER NUMBER
1623	

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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/526,948	EKHART ET AL.	
	Examiner	Art Unit	
	LAYLA BLAND	1623	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *05 May 2008*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *13,15-29 and 32-36* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *13,15-29 and 32-36* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is a response to Applicant's amendment submitted May 5, 2008, wherein claims 13, 20, 24-28, 32, and 33 are amended and new claims 34-36 are added. Claims 13, 15-29, 32 and 33-36 are pending in this application and are examined on the merits herein.

Priority

It is noted that claim 33 does not find support in the priority application, European Application No. 02078684.4. Thus, claim 33 is afforded a priority date of September 9, 2003, not September 9, 2002.

Applicant argues that claim 33 is supported by application EP 02078684.4 at paragraph 24, and includes an excerpt of the relevant paragraph. However, the paragraph recited by Applicant is found not in EP 02078684.4, but in PCT/NL02/00625.

Information Disclosure Statement

Only the English abstracts and figures of documents 6, 8, 13, and 14 of the IDS submitted September 4, 2007 were considered.

In view of Applicant's remarks submitted May 5, 2008, the objection to claim 13 is withdrawn.

In view of Applicant's amendment submitted May 5, 2008, the rejection of claims 13, 19, and 27 under 35 USC 112, second paragraph, for being indefinite is withdrawn.

The following rejections of record are maintained and modified to include new claims 34-36:

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 13, 15-21, 23-26, 28, and 32 are rejected under 35 U.S.C. 102(b) as being anticipated by a typical carnivorous diet as evidenced by Unisa.edu (CARBOHYDRATE METABOLISM, of record) and Elmhurst.edu (Glycogen, of record).

Unisa.edu teaches that the liver contains about 65 g/kg (6.5%) of glycogen and muscle contains about 14 g/Kg (1.4%) of glycogen [Glycogen and glucose interconversion].

Elmhurst.edu teaches that glycogen is composed of 1700-600,000 glucose units linked 1-4 with 1-6 branching every 8-10 units (10-12%) [Glycogen].

Carnivores, including humans, regularly consume muscle and liver tissue to induce satiation. Liver and muscle tissue contain about 6.5% and 1.4%, respectively, of glycogen, and also contain protein. Glycogen is highly branched and has a high molecular weight.

The above cited references do not address the viscosity of aqueous solutions of glycogen at pH 6.8 and pH 2. However, the instant specification states that glycogen has a viscosity increase of more than 400% from pH 4 to pH 2, which is expected to be even more pronounced from pH 6.8 to pH 2.

Thus, the claims are anticipated.

The method by which the α-glucan is produced carries no patentable weight because the claims are drawn to a composition and method of using that composition, not the method of making.

Response to Arguments

Applicant argues that the patent office has not established that the above references are prior art. The above references were applied to establish inherency and not as a prior art against the claims; inherency need not be recognized in the prior art for anticipation. Furthermore, the information contained in the references is known to be basic and common knowledge in the art.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13, 15-23, 24-29, and 32-35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Van Geel-Schutten et al. (Applied and Environmental Microbiology, 1999, pp. 3008-3014, Vol. 65(7), PTO-1449 submitted September 4, 2007).

Van Geel-Schutten et al. teach that polysaccharides such as cellulose, pectin, and starch find application in the food industry. Exopolysaccharides (EPS) produced from lactic acid bacteria are more desirable than the aforementioned polysaccharides because lactic acid bacteria are food-grade organisms with GRAS status [page 3008, first paragraph]. Lactic acid bacteria and EPS contribute to the taste, smell, texture, and preservation of fermented milk products [page 3008, second paragraph]. One such EPS is produced from sucrose by the action of *Lactobacillus reuteri* [page 3008, third paragraph] (a preferred embodiment referred to as reuteran on page 5 of the instant specification).

Van Geel-Schutten et al. do not explicitly teach a food composition comprising reuteran or the administration of such, and do not teach compositions comprising 1-10% by weight of reuteran.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare a food composition, especially a fermented milk composition, comprising reuteran and to administer that composition to a subject. Van Geel-Schutten teaches the desirability of EPS produced by lactic acid bacteria (of which reuteran is one) in fermented milk products. Van Geel-Schutten suggests a food product; the administration of a food product to induce satiety flows logically. It is within

the skill of the skilled artisan to optimize the amount of reuteran for the desired taste, smell and texture.

The method by which the α-glucan is produced carries no patentable weight because the claims are drawn to a composition and method of using that composition, not the method of making.

Van Geel-Schutten et al. do not address the viscosity of aqueous solutions of glycogen at pH 6.8 and pH 2. However, the instant specification, page 8, teaches that milk drinks containing reuteran demonstrate a thickening effect due to increased HCl concentrations.

Response to Arguments

Applicant argues that Van Geel-Schutten does not teach the recited degree of branching. Van Geel-Schutten teaches exopolysaccharides produced by *Lactobacillus reuteri* from sucrose. The instant specification, paragraph 0028, defines "reuteran" as branched alpha-glucans obtained by the action of glucosyltransferase on sucrose, and cites the Van Geel-Schutten reference. Thus, the exopolysaccharides produced by *Lactobacillus reuteri* from sucrose, as taught by Van Geel-Schutten, are "reuteran," a preferred embodiment in the instant application. Claim 27, drawn to a food composition comprising reuteran, depends from claim 28, a food composition comprising a species of branched alpha-glucan having an average molar weight of at least 10^5 Da, and degree of branching of at least 8%. Furthermore, Van Geel-Schutten does provide teachings regarding branching [page 3010, Methylation analysis] and molecular weight [page 3010, EPS size and monosaccharide analysis].

Applicant argues that Van Geel-Schutten does not teach inducing satiety and satiation without increasing caloric intake. Van Geel-Schutten suggests EPS obtained by lactic acid bacteria, such as *Lactobacillus reuteri*, as food additives which contribute positively to taste, smell, or preservation of the food product [page 2008, first column]. As mentioned above, the administration of a food product to induce satiety flows logically. As for "without increasing caloric intake," the claims are not drawn to such.

Applicant argues that Van Geel-Schutten is non-analagous prior art. This is not persuasive because Van Geel-Schutten is drawn to EPS as a food additive which contributes positively to taste and smell. As mentioned above, the administration of a food product to induce satiety flows logically.

Applicant argues that the office action has not established a prima facie case of obviousness for claims 20, 27, and 28 because Van Geel-Schutten does not explicitly teach a food composition comprising reuteran or a composition comprising 1-10% of alpha-glucan or reuteran. Although Van Geel-Schutten does not refer to the EPS as "reuteran," the EPS meets the definition of "reuteran" as provided in the specification. Regarding the 1-10% limitation, Van Geel-Schutten teaches the EPS as a food additi"e to adjust taste, smell, or preservation of the product, and the skilled artisan could easily optimize the amounts, as noted in the rejection above.

For these reasons, the rejection is maintained.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 13, 15, 16, 18, 19, 20-22, 24, 28, 29, 32-34, and 36 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cote et al. (US 5,786,196, July 28, 1998, of record).

Cote et al. teach that high-molecular weight alternan consists primarily of α-1,3-linked and α-1,6-linked glucose residues with approximately 10% branching [column 1, lines 10-17]. Alternan has potential as a substitute for gum arabic and for use as a bulking agent in foods, particulary as noncaloric, carbohydrate-based soluble food additives in artificially sweetened foods [column 1, lines 34-39].

Cote et al. do not exemplify a food composition comprising alternan.

It would have been obvious to one of ordinary skill in the art at the time the invention was made to prepare a food composition comprising alternan and at least 1 wt% of a food protein. Cote et al. suggest the use of alternan as an additive to artificially sweetened foods. The skilled artisan would appreciate that, although not all foods contain protein, many do. For example, sugar free ice creams, yogurts, puddings, and gelatin snacks contain protein. It would also have been obvious to include alternan in a liquid food composition. The skilled artisan would realize that many artificially sweetened foods are liquid (such as diet soda, liquid meal replacement shakes). It is within the skill of the skilled artisan to optimize the amount of glucan in a food

composition to achieve the desired taste and texture. Thus, it would have been obvious to make such a composition and the administration of a food product to induce satiety flows logically.

The method by which the α-glucan is produced carries no patentable weight because the claims are drawn to a composition and method of using that composition, not the method of making.

Response to Arguments

Applicant argues that Cote teaches an enzyme, alternase, which is effective for cleavage of alternan, producing a composition of low molecular weight. This is irrelevant because the portion of Cote that was relied upon for the rejection was directed to high molecular weight alternan, not that which has been depolymerized.

Applicant argues that Cote does not teach that alternan can be used to induce satiety and satiation without increasing caloric intake. The claims are not drawn to a method of inducing satiety and satiation without increasing caloric intake, so this argument is not relevant.

Applicant's arguments with regard to claims 17 and 26, 25, and 23 are moot because these claims were not rejected over Cote.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to LAYLA BLAND whose telephone number is (571)272-9572. The examiner can normally be reached on Tuesday - Friday, 8:00-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Anna Jiang can be reached on (571) 272-0627. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Shaojia Anna Jiang, Ph.D./
Supervisory Patent Examiner, Art Unit 1623

/Layla Bland/
Examiner, Art Unit 1623